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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER	
SYED, NABIL H	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,268	USAMI, MITSUO	
	Examiner	Art Unit	
	NABIL H. SYED	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-10,13-15 and 22-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-10,13-15 and 22-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a final office action in response to the amendments filed 12/28/10. Amendments received on 12/28/10 have been entered. Claims 1-6, 11-12 and 16-21 were previously cancelled. Accordingly claims 7-10, 13-15 and 22-31 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-10, 13-15 and 22-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As of claim 7, the limitation, "wherein the IC tag sets the second information as an initial value of the memory address counter and carrier out count-up of the count value of the memory address counter towards zero" in line 9 renders the claim indefinite. Line 7 of claim 7, recites, "a memory address counter in which its count value indicates a bit address of the memory", as per specification and the applicant's remarks (see remarks filed 12/28/10, page 1) the memory address counter is indicating the bit address of the first information (identification information). And based on specification page 11 (lines 15-24) it is seen that the memory address counter counts up the value of the second information (referred as "initial value" in line 9) toward zero. So based on that the limitations" IC tag sets the second information as an initial value ... and carries

out count-up of the count value of the... counter" should be "IC tag sets the second inofrmation as an initial value... and carries out count-up of the --initial value-- of the... counter," because the second information is count up or counted down to 0 by a clock from the reception unit (see specification page 11, lines 15-24).

As of claim 14, the explanation given above with respect to claim 7 also applies to claim 14.

4. Claims 8-10, 13, 22, 23, 25, 27, 28 and 31 directly or indirectly depend on claim 7 and inherent the same deficiency.

5. Claims 15, 24, 26, 29 and 30 directly or indirectly depend on claim 14 and inherent the same deficiency.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 7-9, 14, 15, 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bandy et al. (6,002,344) in view of Barret, Jr. (4,471,345) and further in view of Augenblick et al. (3,944,928).

As of claims 7 and 14, Bandy discloses an IC tag (via a RFID tag 102, see fig. 3) for transmitting first information to a reception unit while avoiding collision with transmitted information from other IC tags which transmit information to the reception unit (via avoiding contention among different tags; see abstract), comprising:
a memory which memorizes the first information (via tag having the tag ID as the first information) and second information (via tag 102 having a manufacture number; see col. 3, lines 8-17) (note: it is inherent that RFID tag have memory to store the identification number and other data to transmit to the reader) (see col. 3, lines 8-18);
and a memory address counter in which its count value indicates a bit address of the memory (via counter/shift register 312, see fig 3) (also see col. 5, lines 4-8) (note: Bandy discloses that the tag transmits it tag ID when the value in the counter is same as of tag ID, since the ID is stored in the memory and the counter is indicating the value of the ID, Bandy discloses a counter in which its value indicates a bit address of the memory; see col. 5, lines 4-9) (In the office action, below the tag ID, manufacture number and the lot number can be used as first information and second information and third information since claims does not specify which information is indicating the tag ID number or other numbers)
wherein the IC tag carries out count-up of a count value of the counter according to a clock signal received from the reception unit (via counter 312 increment its count when it receives the clock signal from the reader unit; see col. 1, lines 63-67) and the first information stored in the bit address indicated by the counter 312 is sent out to the reception unit successively (via tag transmitting the tag ID or manufacture number or lot

number when the counter value matches any one of the tag ID or manufacture number or lot number (see col. 7, lines 12-33; also see col. 5, lines 4-20). Further note, in Bandy counter 312 indicates to the modulator which information (Tag ID) needs to be modulated for transmission to tag reader 104 (see col. 5, lines 15-20; also see fig. 3).

However Bandy fails to explicitly disclose that the second information control the time of transmission of the first information to the reception unit and the memory address counter and the second information have the same bit number and counter carries count count-up of a count value of the memory address counter towards zero.

Barrett, discloses a communication system, wherein a tag contains an identification code (first information) and a pseudorandom generator containing second information (see fig. 5; also see abstract; also see col. 20, lines 55-65). Barret further discloses that the information in the pseudorandom generator is loaded into a down counter (memory address counter) and then the down counter is decremented with a clock signal, and the tag transmits the identification code of the tag when the down counter reaches zero (see col. 20, lines 55-66; also see col.). Further note, since the random number in the random number generator is set into the down counter (memory address counter) down counter will have the same bit number as the random number generated by the random number generator. Barret further disclsoes that each tag will transmit at random intervals and it will avoid collision with the transmission from other IC tags (see col. 17, lines 50-55 and col. 19, lines 10-25).

From the teaching of Barret it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bandy to

include the function of including a down counter as taught by Barret, so each tag will transmit at a different time interval based on the value in their counters, reducing the chances of contention.

Bandy further discloses that the tag increments the counter 312 (see fig. 3) when it receives a clock signal from the interrogator (see fig. 5; also see col. 7, lines 1-10). Further the interrogator of Bendy transmits the clock signal continuously until the counter 312 reaches the specified number, in this case when the count in the counter matches the Tag ID (see col. 7, lines 5-10). However the combination of Bendy and Barret fails to explicitly disclose that the clock signal is transmitted by the interrogator using a carrier modulation signal modulated by a continuous clock signal.

Augenblick discloses a communication system, wherein an interrogator (via transmitter 12; see fig. 12), transmits a carrier modulated signal modulated by a clock signal (see col. 15, lines 66 through col. 16, lines 5).

From the teaching of Augenblick it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bandy and Barret to include the step of transmitting the clock signal using a carrier modulated signal modulated by a clock signal as taught by Augenblcik in order to transmit the data and clock using a single signal.

As of claim 8, Bandy discloses that the memory memorizes the third information (via tag 102 memorizing a lot number; see fig. 3) and the IC tag sets either the second information or the third information as an initial value of the counter (note: Bandy

discloses that if the third tag identifier does not resolve the contention, further reading can be done by adding more identification numbers in the tag (see col. 4, lines 7-12).

As of claims 9 and 15, Bandy discloses that the IC tag selects the second information or the third information by means of the mode switching portion and sets it as an initial value of the counter (via instruction interpreter 312 indicating which of the three numbers (tag ID, manufacture, lot number) are requested by the reader by telling the tag which of the read cycle is being performed) (see col. 5, lines 22-27).

As of claims 22-24, Bandy discloses the IC tag wherein the first information is comprised of at least identification number and an error detection code for detecting an error in the identification number (note: Bandy discloses this function by tag having a tag ID and a error code in case the contention occurs. For example tag can transmit its error-code using checksum (see col. 3, lines 48-55) and wherein the second information is a random number (via storing the tag ID's or manufacture number and lot number at the time of manufacturing; see col. 3, lines 1-17).

Barret further disclsoes that the response signal from the tag comprises 16 bits indicating the identity of the tag and 6 bits containing an error checking code (see col. 5, lines 51-56). Barret further discloses that the second information is a random number (via pseudorandom generator containing a randomly generated second information; see fig. 5; also see abstract; also see col. 20, lines 55-65).

As of claims 25 and 26, Barret discloses that the second information is a random number (via pseudorandom generator containing a randomly generated second information; see fig. 5; also see abstract; also see col. 20, lines 55-65).).

As of claims 27-30, Bandy discloses the IC tag wherein the first information is comprised of at least identification number and an error detection code for detecting an error in the identification number (note: Bandy discloses this function by tag having a tag ID and a error code in case the contention occurs).

Barret further disclsoes that the response signal from the tag comprises 16 bits indicating the identity of the tag (see col. 5, lines 51-56).

As of claim 31, Augenblick discloses that the remote station (tag) recognized a first clock of the clock signal when the carrier modulation signal continues to be a high level over a specific time, drops to a low level and returns to a high level after a specified time elapses (see fig. 6a, which shows that the clock signal is detected when the carrier signal is high and low within a specific time period; also see col. 5, lines 52-57 and col. 16, lines 35-39)

8. Claims 10 and 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bandy, in view of Barret, in view of Augenblick as applied to claim 7 above, and further in view of Raimbaul et al. (6,177,858).

As of claim 10, the combination of Bandy, Barret and Augenblick discloses all the elements of the claimed invention as mentioned in claim 9 above abut fails to explicitly disclose that the mode switching portion is a flip-flop.

Raimbault discloses an IC tag (via an electronic tag, fig. 1) wherein the mode-switching portion is a flip-flop (via electronic tag having a flip-flop in the logic circuit 4 to change the state of the tag; see fig.1, also see col. 7, lines 64-67 and col. 8, lines 1-7).

Barret further discloses that the IC tag selects the second information according to a value of the flip-flops 204, 205, 206 and sets it as an initial value of the down counter (see col. 14, lines 55-65).

From the teaching of Raimbaul it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tag of Bandy to include a flip-flop in order to make the transponder easily switch between the read mode and transmit mode (see col. 11 and 18).

As of claim 13, Bandy discloses the IC tag wherein the first information is comprised of at least identification number and an error detection code for detecting an error in the identification number (note: Bandy discloses this function by tag having a tag ID and a error code in case the contention occurs).

Barret further disclsoes that the response signal from the tag comprises 16 bits indicating the identity of the tag (see col. 5, lines 51-56).

Response to Arguments

9. Applicant's arguments filed 12/28/10 have been fully considered but they are not persuasive.

As of claims 7 and 14, applicant argues that none of the cited reference discloses the claimed feature of "the memory address counter indicating a bit address of a memory and performing a counting information with the claimed second information being set to thereby avoid collision with the transmitted information from said other IC tags." The Examiner respectfully disagrees.

Barrett, discloses a communication system, wherein a tag contains an identification code (first information) and a pseudorandom generator containing second information (see fig. 5; also see abstract; also see col. 20, lines 5-25). Barret further discloses that the information in the pseudorandom generator is loaded into a down counter (memory address counter) and then the down counter is decremented with a clock signal, and the tag transmits the identification code of the tag when the down counter reaches zero (see col. 20, lines 55-66). Further note, since the random number in the random number generator is set into the down counter (memory address counter) down counter will have the same bit number as the random number generated by the random number generator. Barret further discloses that each tag will transmit at random intervals and it will avoid collision with the transmission from other IC tags (see col. 19, lines 10-25).

Bandy further discloses a memory address counter in which its count value indicates a bit address of the memory (via counter/shift register 312, see fig 3) (also see col. 5, lines 4-8) (note: Bandy discloses that the tag transmits it tag ID when the value in the counter is same as of tag ID, since the ID is stored in the memory and the counter is indicating the value of the ID, Bandy discloses a counter in which its value indicates a bit address of the memory; see col. 5, lines 4-9). Bandy further discloses that the first information stored in the bit address indicated by the counter 312 is sent out to the reception unit successively (via tag transmitting the tag ID or manufacture number or lot number when the counter value matches any one of the tag ID or manufacture number or lot number (see col. 7, lines 12-33; also see col. 5, lines 4-20). Further note, in Bandy

counter 312 indicates to the modulator which information (Tag ID) needs to be modulated for transmission to tag reader 104 (see col. 5, lines 15-20; also see fig. 3). So in Bandy the counter 32 performs two operation, it perform the function of count up of a number, and it also tell the bit address of the memory.

Further in order to further support the arguments, Tervoert (5,124,699) discloses a responder which receives an interrogation signal, generates a random number ranging from 0 -127 using a scrambler 53 (see fig. 2) and then perform a count up operation of the generated random number using counter 58 and after the count value of the counter 58 reaches zero the identification number indicated by the address counter 54 is transmitted (see col. 5, lines 20-30). Tervoert further discloses that the address counter 54 can be used as the counter 58, hence address counter 58 indicates the bit address of the memory and performs a counting operation towards zero in accordance with a random number being set and when the counting reaches 0 accounting to the counting operation, the identification number stored in the response is transmitted (see col. 5, lines 20-35). Note: the reference of Tervoert is not used to reject the claims, it is merely shown to support the arguments that it is known that a single counter is indicating bit address of memory and performing a count function.

Based on the explanation given above, it is the Examiner's position that the combination of Bandy, Barret and Augenblick discloses the limitations claim in the present application.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NABIL H. SYED whose telephone number is (571)270-3028. The examiner can normally be reached on M-F 7:30-5:00 alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571)272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NABIL H SYED/
Examiner
Art Unit 2612

N.S

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2612